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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,790	11/26/2003	Hiroyuki Idobuchi	008312-0307052	4143
909	7590	08/31/2006	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP			PATEL, GAUTAM	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	
			2627	

DATE MAILED: 08/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/721,790	<b>Applicant(s)</b> IDOBUCHI, HIROYUKI	
	<b>Examiner</b> Gautam R. Patel	<b>Art Unit</b> 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7 and 9-11 is/are rejected.
- 7) ☒ Claim(s) 4,8 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/26/03; 6/27/06</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-12 are pending for the examination.

#### **Priority**

2. Receipt is acknowledged of papers submitted under 35 U.S.C. § 119(a)-(d), which papers have been placed of record in the file.

#### **Specification**

3. The disclosure is objected for following reasons.  
The title of the invention is neither precise nor descriptive. A new title is required which should include, using twenty words or fewer, claimed features that differentiate the invention from the Prior Art. It is recommended that the title should reflect the gist of or the improvement of the present invention.  
Correction is required.

#### **Claim Rejections - 35 U.S.C. § 102**

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:  
A person shall be entitled to a patent unless --  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-7, and 9-11 are rejected under 35 U.S.C. § 102(b) as being anticipated by Toda et al., US. patent 6,272,100 (hereafter Toda).

As to claim 1, Toda discloses the invention as claimed, a data recording apparatus [see Figs. 1, 3, 6 and 9, especially 1] including a recording/erase unit and an additional recording control unit, comprising/ the steps of:

a recording/erase unit [fig. 1, units 13 and 15] configured to record or erase target data by irradiating a DVD-RW medium with light beams with different intensities to change a phase change recording layer of the medium to a first data recorded state, second data recorded state, and data non-recorded state; and

an additional recording control unit [fig. 1, unit 19] configured to control additional recording of target data in response to an additional recording instruction by recording the target data by changing the phase change recording layer to the first and second data recorded states

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and by changing the phase change recording layer to the data non-recorded state from a recording terminal end of the target data over a predetermined length using the light beams with different intensities emitted by the recording/erase unit [col. 3, lines 7-23; col. 3, line 61 to col. 4, line 6; col. 5, lines 9-33; col. 7, lines 3-22 and col. 8, lines 30-55];

5. The aforementioned claim 2, recites the following elements, inter alia, disclosed in Toda:  
the additional recording control unit searches for an area in the data non-recorded state with the predetermined length in response to the additional recording instruction, and records the target data from one end to the other end of the found area [col. 3, lines 7-23; col. 3, line 61 to col. 4, line 6; col. 5, lines 9-33; col. 7, lines 3-22 and col. 8, lines 30-55].

6. The aforementioned claim 3, recites the following elements, inter alia, disclosed in Toda:  
the additional recording control unit searches for an area in the data non-recorded state with the predetermined length, which is present on an innermost periphery side in a data recording area of the medium, in response to the additional recording instruction, and records the target data from one end to the other end of the found area [col. 3, lines 7-23; col. 3, line 61 to col. 4, line 6; col. 5, lines 9-33; col. 7, lines 3-22 and col. 8, lines 30-55].

7. The aforementioned claim 5, recites the following steps, inter alia, disclosed in Toda:  
recording target data by irradiating the medium with light beams with different intensities to change a phase change recording layer of the medium to a first data recorded state and second data recorded state; and changing the phase change recording layer to a data non-recorded state by irradiating the medium with a light beam of a predetermined intensity from a recording terminal end of the target data over a predetermined length [col. 3, lines 7-23; col. 3, line 61 to col. 4, line 6; col. 5, lines 9-33; col. 7, lines 3-22 and col. 8, lines 30-55].

8. The aforementioned claim 6, recites the following steps, inter alia, disclosed in Toda:  
an area in the data non-recorded state with the predetermined length is searched for in response to the additional recording instruction, and the target data is recorded from one end to

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the other end of the found area [col. 3, lines 7-23; col. 3, line 61 to col. 4, line 6; col. 5, lines 9-33; col. 7, lines 3-22 and col. 8, lines 30-55].

9. The aforementioned claim 7, recites the following steps, inter alia, disclosed in Toda:

an area in the data non-recorded state with the predetermined length, which is present on an innermost periphery side in a data recording area of the medium, is searched for in response to the additional recording instruction, and the target data is recorded from one end to the other end of the found area [col. 3, lines 7-23; col. 3, line 61 to col. 4, line 6; col. 5, lines 9-33; col. 7, lines 3-22 and col. 8, lines 30-55].

10. The aforementioned claim 9, recites the following elements, inter alia, disclosed in Toda:

a phase change recording layer, wherein the phase change recording layer is changed to a first data recorded state, second data recorded state, and data non-recorded state upon being irradiated with light beams with different intensities, and the phase change recording layer records target data when the phase change recording layer is changed to the first and second data recorded states, and the phase change recording layer is changed to the data non-recorded state over a predetermined length from a recording terminal end of the target data, upon being irradiated with the light beams with different intensities corresponding to additional recording control of the target data [col. 3, lines 7-23; col. 3, line 61 to col. 4, line 6; col. 5, lines 9-33; col. 7, lines 3-22 and col. 8, lines 30-55].

11. The aforementioned claim 10, recites the following elements, inter alia, disclosed in Toda:

the target data is recorded from one end to the other end of an area in the data non-recorded state with the predetermined length, which is found by a search from the phase change recording layer, in correspondence with additional recording control of the target data [col. 3, lines 7-23; col. 3, line 61 to col. 4, line 6; col. 5, lines 9-33; col. 7, lines 3-22 and col. 8, lines 30-55].

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12. The aforementioned claim 11, recites the following elements, inter alia, disclosed in Toda:

the target data is recorded from one end to the other end of an area in the data non-recorded state with the predetermined length, which is found by a search from the phase change recording layer and is present on an innermost periphery side, in correspondence with additional recording control of the target data [col. 3, lines 7-23; col. 3, line 61 to col. 4, line 6; col. 5, lines 9-33; col. 7, lines 3-22 and col. 8, lines 30-55].

### **Allowable Subject Matter**

13. Claims 4, 8 and 12 are objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

NOTE: Claims 4, 8 and 12 are allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a data recording apparatus with recording/erase unit and additional recording unit with phase change surface and recording additional data in which the “control unit searches for an area in the data non-recorded state with predetermined length, by skipping in increments of predetermined length from a start point on the inner most periphery side of data recording area of the medium and records target data from one end to the other end of the found area”.

It is noted that the closest prior art, Toda et al. (shows a similar apparatus which does packet write and also has start and stop point of the data being recorded and also changes power level.

However Toda et al. fails to disclose the concept of skipping in the increments of predetermined length as disclosed and claimed.

NOTE: It is noted that skipping of tracks [during writing] is well known in the art however skipping as it is related to this concept of data writing is not disclosed.

### **Other prior art cited**

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14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) Hasegawa et al. (US. Patent 5,673,249).
- b) Lee et al. (US. patent 6,785,206).
- c) Syo et al. (US. patent 5,453,971).
- d) Kobayashi et al. (US. patent 5,367,514).

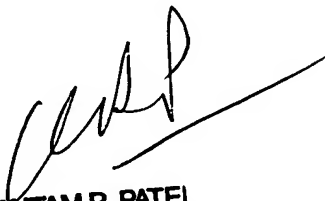
**Contact information**

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is 571-272-7625. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Dwayne Bost, who can be reached on (571) 272-7023.

Any inquiry of a general nature or relating to the status of this application should be directed to the Electronic Business Center whose telephone number is 866-217-9197 or the USPTO contact Center telephone number is (800) PTO-9199.

  
**GAUTAM R. PATEL**  
**PRIMARY EXAMINER**

Gautam R. Patel  
Primary Examiner  
Group Art Unit 2627

August 28, 2006